MINUTES
of the
FIFTH MEETING
of the
WATER AND NATURAL RESOURCES COMMITTEE

November 14-15, 2013
Room 307, State Capitol
Santa Fe

The fifth meeting of the Water and Natural Resources Committee was called to order on Thursday, November 14, 2013, at 9:20 a.m. by Senator Phil A. Griego, chair, in Room 307 of the State Capitol in Santa Fe.

Present
Sen. Phil A. Griego, Chair
Rep. George Dodge, Jr., Vice Chair
Rep. Paul C. Bandy
Sen. Joseph Cervantes
Rep. Emily Kane
Rep. Larry A. Larrañaga
Sen. George K. Munoz (November 15)
Sen. Cliff R. Pirtle (November 15)
Sen. Sander Rue
Sen. Benny Shendo, Jr. (November 14)
Rep. Mimi Stewart (November 14)
Rep. James R.J. Strickler
Rep. Don L. Tripp
Sen. Peter Wirth (November 14)
Sen. Pat Woods

Absent
Rep. Phillip M. Archuleta
Rep. Brian F. Egolf, Jr.
Rep. William "Bill" J. Gray
Rep. Dona G. Irwin

Advisory Members
Rep. Gail Chasey
Sen. Carlos R. Cisneros (November 14)
Rep. Sharon Clahchischilliage
Sen. Lee S. Cotter
Rep. Anna M. Crook
Rep. Candy Spence Ezzell
Sen. Ron Griggs
Rep. Rodolpho "Rudy" S. Martinez (November 14)
Rep. W. Ken Martinez
Sen. Mary Kay Papen
Rep. Vickie Perea (November 15)
Sen. Nancy Rodriguez (November 15)
Rep. Jeff Steinborn
Rep. Cathrynn N. Brown
Sen. Pete Campos
Rep. Nora Espinoza
Sen. Stuart Ingle
Sen. Gay G. Kernan
Rep. James Roger Madalena
Sen. Cisco McSorley
Sen. Steven P. Neville
Sen. Gerald Ortiz y Pino
Sen. John C. Ryan
Rep. Henry Kiki Saavedra
Rep. Tomás E. Salazar
Sen. William E. Sharer

Rep. Bob Wooley (November 14) Sen. John Arthur Smith

(Attendance dates are noted for those members not present for the entire meeting.)

Staff
Jon Boller, Legislative Council Service (LCS)
Gordon Meeks, LCS
Jeret Fleetwood, LCS

Guests
The guest list is in the original meeting file.

Handouts
Handouts and other written testimony can be found in the meeting file or on the New Mexico legislature's web site at www.nmlegis.gov.

Thursday, November 14

Introductions and Announcements
Senator Griego began the meeting by having members of the committee and staff introduce themselves. Senator Wirth presented a letter to the committee from several New Mexico hunting, fishing and sportsmen organizations urging the governor to support non-diversion alternatives for any water projects proposed on the Gila River pursuant to the federal Arizona Water Settlements Act.

Ground Water Management Districts — Promoting Sustainable Ground Water Use
Steve Vandiver, general manager of the Rio Grande Water Conservation District, outlined the formation and function of ground water management subdistricts in Colorado and, in particular, in the San Luis Valley. He began by explaining that as Colorado sought to address Rio Grande Compact delivery obligations and federal Endangered Species Act of 1973 compliance, the Office of the State Engineer (OSE) began to develop rules to administer ground and surface water. Mr. Vandiver explained that development of the rules involved complex modeling of water use and that water users who impaired more senior users, particularly through ground water pumping, would likely face curtailment of water use or would have to produce a replacement plan to address the impairment to surface water users.

Mr. Vandiver explained that many ground water users in the state worried that the OSE rules would be too harsh, and users in some regions, beginning with Arkansas River Basin users, sought to stay ahead of the process by forming agricultural subdistricts. He went on to note that the subdistricts were formed to allow ground water users to develop replacement plans suitable for their particular subdistricts, and that this was a recognition that water users causing the depletions should be the ones to pay, rather than more senior users or the state. Accordingly, Mr. Vandiver explained, the legislation authorizing the creation of subdistricts granted them the

ability to assess fees on those junior users who pumped ground water and impaired the rights of more senior surface water users. He noted that subdistricts could be formed by a majority of landowners in a district petitioning to form a subdistrict and that the assessed fees, typically up to $75.00 per acre-foot, went into a pool used to purchase and lease water rights to offset the effects of ground water pumping and also to purchase and let lie fallow land in critical areas. Mr. Vandiver emphasized that passage of the legislation authorizing subdistricts, and the formation of the subdistricts themselves, has not been easy, but that landowners eventually recognized that the alternative could be worse — the state engineer could begin to shut down wells.

Questions and comments from the committee included:

- not all areas in Colorado have formed subdistricts;
- Costilla County in Colorado is developing a mechanism similar to the ground water subdistrict system;
- in order for a subdistrict to form, over 50 percent of landowners in a proposed ground water subdistrict have to vote in favor of the formation;
- the San Luis Valley Ground Water Subdistrict raises about $10 million a year;
- United State Department of Agriculture Natural Resources Conservation Service funding is available as part of a contract to fallow and plant a cover crop on land purchased in order to retire its water rights;
- similarities between Colorado and New Mexico water courts;
- the petition of well owners to form a subdistrict, while the statute allows for fee collection of a maximum of $75.00 per acre-foot of water used;
- while Colorado has continued to meet its compact obligations, junior water rights holders, particularly ground water pumpers, have impaired senior water rights holders and now must make them whole;
- if New Mexico water users were to try a similar approach, additional research on the relationship between surface and ground water depletions would be necessary;
- the Colorado approach and New Mexico's active water resource management (AWRM) initiative are not altogether different, in that they both seek to avoid absolute priority administration of water, which would result in cutting off all ground water pumping in many areas;
- all of the western states are implementing some form of AWRM;
- the threat of priority administration was, in part, the impetus for developing agricultural subdistricts;
- ground water users who have junior water rights in the subdistricts pay fees, not the State of Colorado;
- the State of Colorado did pay for the modeling effort; and
- the methodology for the modeling has been tested and proven in court to be adequate for the purpose of the subdistricts.

Middle Rio Grande Levee Task Force Report

Rolf Schmidt-Petersen, Interstate Stream Commission (ISC), provided the committee with a brief history of some of the work done on the middle Rio Grande regarding flood control.

He explained that flooding in the early 1900s through the 1940s was damaging the Rio Grande Basin, so the U.S. Army Corps of Engineers reconstructed the river between Velarde and Socorro and moved the path of the river into Albuquerque, removing about 90 miles of the river. The project also introduced a system of levees, channels and canals, all of which helped to mitigate damage from flooding and snowmelt, as well as deliver water to Elephant Butte Reservoir and make compact deliveries. However, Mr. Schmidt-Petersen noted that most of those levees are at least 50 years old, and that about 200 to 300 miles of levees need to be replaced. For example, he pointed out that a project to rebuild levees near Socorro and San Acacia is under way.

John D'Antonio, deputy district engineer for project management, United States Army Corps of Engineers, explained that the Middle Rio Grande Levee Task Force was created at the request of the legislature in Senate Memorial 18 (2009 regular session), and this is the fifth report by the task force. He said that some progress and cost-sharing agreements have been made, but cautioned that New Mexico is in dire need of upgrading many of its levees, noting that the right type of storm could cause major problems for Albuquerque. The current project on the San Acacia levee will cost approximately $287 million, he said, with state and local governments responsible for 15 percent of that amount.

John Kelly, Middle Rio Grande Conservancy District (MRGCD), explained that levees help strike a balance between water delivery and flood control. He also noted that there are $653 million in levee needs in the Rio Grande Valley. However, Mr. Kelly said that many potential levee projects have cost-match requirements that the MRGCD cannot afford. He noted that while the district has about $16 million in funds, $4 million goes toward operating costs and another $6 million is in an endowment that cannot be touched, leaving about $5 million in reserve funding. Mr. Kelly also suggested that the MRGCD needs to raise its mill levy.

Questions and comments from the committee included:

- Federal Emergency Management Agency standards call for levees able to withstand a 100-year flood event;
- MRGCD cost-sharing of non-federal money with local sponsors;
- levees are designed to withstand certain amounts and velocities of water, rather than to store water for a certain amount of time;
- estimates are about $3.5 million per mile to replace levees in the state;
- vegetation standards for levees have changed: trees are a problem as they rot and create structural issues;
- San Acacia levee funding comes from federal money, the Water Trust Board, the MRGCD and the ISC;
- private contractors do most of the work on levee rebuilding, but design is done in-house;
- contractors pay gross receipts taxes, which help offset state contributions;
- the growing season in the middle Rio Grande region lasts through November 15, while summer water deliveries consisted of four to six water deliveries of four to six inches each;

- the MRGCD does not issue bonds and has no bonding capacity;
- the Middle Rio Grande Levee Task Force is developing a list of priorities;
- use of dirt dredged from the river channel being used for levees is an example of making the most efficient use of available resources and money;
- without Cochiti and Jemez Canyon dams, flows in Albuquerque would have been 15,000 to 20,000 cubic feet of water per second (cfs) during the September rains, rather than the observed 4,300 cfs; and
- the recent floods may not have constituted a 100-year event.

Use of Concentrate from Brackish Water Treatment

Aubrey Howard, Glenjohn Capital, described technology developed by Glenjohn Capital that turns concentrated brine into marketable products. He began by explaining that global water shortage issues have begun to be addressed, in part, by desalination plants, noting that there are 15,000 desalination plants in operation worldwide. However, Mr. Howard also pointed out that the byproduct of desalination plants is concentrated brine, which is difficult to dispose of. Mr. Howard said that Glenjohn Capital has developed technology that converts concentrated brine into potable water and fertilizers, including potassium nitrate, noting that he is in the fertilizer business, not the water business. Mr. Howard went on to explain that there is a growing global market for potassium nitrate, which is currently not manufactured in the United States. He also discussed plans to build a 20-million-gallon-per-day treatment plant, thus proving that the concentrated brine conversion process works, and he noted that fertilizer sales would actually offset the cost of treating the concentrated brine. Mr. Howard also suggested that the fertilizers could eventually be used to develop crops such as sugar beets, which could replace corn in ethanol production.

Questions and comments from the committee included:

- the use of the concentrated brine conversion technology to treat brackish ground water near Alamogordo is technologically feasible, but millions of gallons would have to be processed to make it economically viable;
- the quality of the treated water can be configured so that it suits its eventual purpose;
- ion exchange can also be added to the treatment process to extract heavy metals that may be present in brines;
- research has been conducted on the ground water quality of aquifers near Alamogordo and California's Imperial Valley;
- the next phase of Glenjohn Capital's plans is to find a public entity with which to form a partnership in order to provide potable water to cities;
- acid mine drains produce similarly contaminated water and can also be treated;
- there is no way for a similar company to compete without finding a use for concentrated brine; and
- potassium nitrate is currently produced in Israel and Chile.

Water Quality Project Report

Samantha Multari, a student at Hope Christian School, presented her 2013 science project, in which she tested the water from 39 different locations in New Mexico to determine the total dissolved solids (TDS) at each location. She explained that she used a digital water purity tester to measure TDS three separate times at each location, as well as testing tap, well, bottled, filtered and distilled water. Ms. Multari also collected data from 18 other states and four different countries. She reported that the well water tested at the White Sands Missile Range contained the most TDS, while samples from the Los Alamos National Laboratory had the least. Ms. Multari also pointed out that, of the various types of water she tested, well water had significantly more TDS than any other type. She also reported that, among states, South Dakota had the highest average TDS in its tap water, with California and North Carolina tying for the lowest, while New Mexico's average TDS fell in the middle. Ms. Multari also noted that TDS for tap water and well water were different at the same location at different times of day. She pointed out that water filtered by reverse osmosis and distilled water consistently had the least amount of TDS.

Questions and comments from the committee included:

- variations within the same household or at the same taps;
- proximity to old volcanic flows seemed to have some effect on samples;
- the science project was inspired by a trip to Italy, where the tap water tasted different;
- future projects could include analysis of types of contaminants at each sample site;
- 175 total water samples were tested;
- the water sample at the National Radio Astronomy Observatory's Very Large Array was taken from a drinking water fountain; and
- the sample from the White Sands Missile Range was taken from a gas station water fountain.

Utton Transboundary Resources Center Report

Marilyn C. O'Leary, interim director of the Utton Transboundary Resources Center, University of New Mexico School of Law, provided the committee with an update on the activities of the center. She explained that the previous director had retired, and that because she was the center's first director, she agreed to return as interim director for the purpose of strategic planning and searching for a new director. Ms. O'Leary explained that the purpose of the center is to bring people together on water issues without conflicts; to provide services and work with students; and to produce various water publications. She also noted that the center administers the Joe M Stell Water Ombudsman Program, and that the Utton Transboundry Resources Center is the only law-based water resources center in the state.

Darcy Bushnell, director of the Joe M Stell Water Ombudsman Program, explained that the program helps those without lawyers with water rights adjudications. She noted that the program has been focused recently on claimants in the Taos settlement, as well as redesigning the pro se forms for claimants. Ms. Bushnell also noted that the center would begin to work in Santa Fe on the Aamodt settlement soon.

Ms. O'Leary also discussed the Native American Water Rights Settlement Project, an electronic repository of Native American water rights settlements available on the internet. She said that a future project involves a database on water rights court decisions in New Mexico. Ms. O'Leary said that she wants the center to return to its 2009 funding levels so that the center could again be fully staffed.

Questions and comments from the committee included:

- Judge Jerald A. Valentine recognized the tension between the OSE and claimants, and the importance of the ombudsman program to unrepresented water rights claimants;
- some progress is being made on adjudications, and some effort is being made to streamline the process;
- the legislature cannot make rules for the court;
- other than the ombudsman, there is no other neutral party in water rights adjudications; and
- New Mexico may be doing itself a disservice by not fully funding the Utton Transboundary Resources Center.

Acequia Perspectives on Water Scarcity, AWRM and Funding for Irrigation Infrastructure

Paula Garcia, executive director of the New Mexico Acequia Association, began by providing the committee with a brief overview of the New Mexico Acequia Association. She went on to discuss the implementation of AWRM by the OSE. Ms. Garcia explained that acequia associations prefer to settle disputes internally rather than face a priority call, noting that internal dispute resolution is a more traditional approach. She pointed to a water-sharing agreement between acequia associations on the Rio Chama as an example of the OSE and acequia associations working together to avoid a priority call on the river. Ms. Garcia also discussed the water management and metering components of AWRM, explaining that while acequia associations have a long tradition of water management and sharing, many acequia associations are looking at entering into metering agreements with the OSE to make sure that the associations retain control of the acequia itself. She said that some earlier agreements turned over control of acequia headgates to the OSE.

Ms. Garcia discussed infrastructure funding, noting that acequia associations should not be left behind in water project funding. She explained that the primary sources of infrastructure funding are the New Mexico Irrigation Works Construction Fund, capital outlay and cost-sharing projects with the ISC. However, Ms. Garcia noted that the New Mexico Irrigation Works Construction Fund will be depleted by fiscal year 2016. She also said that, with the Water Trust Board streamlining its operations, acequia associations need another water infrastructure funding source. Ms. Garcia also pointed out that the governor's executive order requiring completed audits for all capital outlay fund recipients has been particularly tough on acequia associations, and she noted that additional funding is necessary to hire an auditor to help acequia associations.

Questions and comments from the committee included:

- the New Mexico Acequia Association serves members who oversee between 100,000 and 300,000 acres of land;
- acequia associations being granted free or reduced-cost audits from the state auditor could eventually lead to all local governments asking for help with their audits;
- the ISC has asked that funding shift from the New Mexico Irrigation Works Construction Fund to general fund money;
- acequia associations and community ditch associations are the same thing;
- over 20 acequia associations received capital outlay money in 2013, but some associations were not in compliance with audit requirements;
- the ISC and the state auditor have worked with most of the acequia associations that received capital outlay money, but the audits may not be completed in time for the December bond sale;
- most acequia associations are run by volunteers and do not have funding available to hire an auditor; and
- the problem is not unique to acequia associations, as many small entities are unable to secure funding and/or audits.

Department of Environment Initiative on River Restoration

James Hogan, Surface Water Quality Bureau, Department of Environment (NMED), provided the committee with testimony regarding the river stewardship program. He explained that the program seeks to improve the habitat for fish and wildlife, as well as to provide safe water for swimming and other recreational activities, including hunting and fishing. Mr. Hogan provided the committee with examples of past project partnerships, including the Gila River, Pecos River, Cebolla Canyon River and the Santa Fe River.

Ryan Flynn, secretary-designate of environment, also discussed the river stewardship program, explaining that the NMED is seeking a $1.5 million capital outlay appropriation to fund projects that address the root causes of poor water quality and stream habitat. He noted that the NMED can leverage its request with $2.24 million in federal Clean Water Act of 1977 funds. Secretary-Designate Flynn also said that the first priority for future projects is projects that address water quality and stream habitat impacts associated with the wildfires experienced in the last three years or projects that advance source-water protection of public drinking water. He also noted that past capital outlay funding for river stewardship programs supported 48 projects across the state, restored 34.6 miles of river and supported 73 contractors, most of which were New Mexico businesses.

Questions and comments from the committee included:

- how far $1.5 million really goes when it costs millions of dollars to restore habitat after a single large wildfire;
- river restoration, in particular near-stream habitat restoration, is the real focus;
- projects go through a request for proposals process, but some areas are higher priority than others;
- $1.5 million is the governor's capital outlay request;

- the average cost of a project is about $200,000 to $300,000;
- the importance of maintaining investments in river restoration; and
- the concept of investing in cooperation with other entities is a good one.

The committee recessed at 4:20 p.m.

Friday, November 15

Senator Griego began the meeting by welcoming Representative Perea, who was appointed by the governor to fill the vacancy in House District 50.

Update on Wildlife Safety Zones

Mark Watson, Department of Game and Fish, and Coleman Burnett, Department of Transportation (DOT), provided the committee with an update on the creation of wildlife safety zones to reduce the number of collisions between wildlife and vehicles on New Mexico roads. They explained that a number of workshops were held in 2011 to identify problem areas, and a segment of U.S. 64 between Chama and Tierra Amarilla was selected for a pilot project. Mr. Watson and Ms. Burnett said that the pilot project featured vegetation management and flashing warning signs. They also noted that more workshops were held earlier in 2013 and that 32 more priority segments of road were identified, which were eventually narrowed to three high-priority segments: Interstate 25 near Raton, U.S. Highway 550 near Cuba and U.S. Highway 70 near Mescalero. Mr. Watson and Ms. Burnett went on to discuss the various strategies employed on each segment, such as fencing that directs wildlife to culverts under the road on Interstate 25 and flashing signs on U.S. 550 and U.S. 70.

Questions and comments from the committee included:

- involvement of the Wild Friends Program at the University of New Mexico in the passage of the original memorial calling for wildlife safety zones;
- the data set used to select priority road segments featured about 10,000 records over about 10 years, although that probably represents half of the actual number of collisions, as most go unreported;
- some collisions do involve injuries to motorists;
- the DOT is using all available data to look at building wildlife mitigation features into new roads;
- some federal highway safety money is available for programs like this;
- wildlife detection signs employed in Colorado near Bayfield rely on an echophone system that detects movement and are only about 30 percent effective;
- there are national data that can be analyzed to determine the effectiveness of various approaches to wildlife-vehicle collisions;
- follow-up studies in New Mexico will take five to 10 years and will likely require additional funding; and
- data are not immediately available on how changes in speed limits affect wildlife-vehicle collision statistics.

On a motion made, seconded and passed, the minutes of the October meeting of the Drought Subcommittee were approved as submitted.

On a motion made, seconded and passed, the minutes of the August meeting of the Water and Natural Resources Committee were approved as submitted.

Michael Aune presented the committee with a letter requesting action in the United States Congress on two issues: funding for watershed restoration and fire prevention and holding the United States Forest Service responsible for forest fire mitigation. Mr. Aune said that money from the federal Land and Water Conservation Fund previously had been distributed to the states, and he urged Congress to restore funding to the state. He said that there is no state funding to get watersheds in order, and the state cannot depend solely on the Federal Emergency Management Agency for watershed funding.

Consideration of Legislation

Pam Roy, co-director of Farm to Table, presented a bill requesting a $1.4 million appropriation to the Public Education Department to purchase New Mexico-grown fresh fruits and vegetables for school meal programs.

On a motion made, seconded and passed, the committee endorsed the bill.

T.J. Trujillo presented the committee with a bill excluding humate from the New Mexico Mining Act and changing financial assurance requirements for all mining operations.

On a motion made, seconded and passed, the committee endorsed the bill.

Mr. Trujillo presented a second bill, which changed financial assurance requirements in the New Mexico Mining Act, that was also endorsed by the committee without objection.

Mr. Trujillo also presented the committee with a third bill amending the Right to Farm Act to prevent certain agricultural operation facilities from being found to be operating negligently and to clarify that operating in conformity with federal, state and local laws and regulations creates a presumption of operating in a manner consistent with accepted agricultural practices.

The committee amended the bill to strike Subsection C in its entirety.

On a motion made, seconded and passed, the committee endorsed the amended bill.

Representatives from Citizen Action New Mexico spoke to the committee regarding the mixed-waste landfill at Sandia National Laboratories. They explained that dangerous metals and radioactive material are in the unlined landfill, which could potentially contaminate

Albuquerque's ground water. The representatives from Citizen Action New Mexico requested that a schedule for completion of cleanup of the landfill be established and that a plan for decommission and remediation of the landfill be developed.

There being no further business, the committee adjourned at 11:30 a.m.